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A Meta-Analysis on Local and Global Face Perception in Individuals with ASD



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Introduction

Background:

Face perception in ASD:

- Atypical face categorization and reduced face aftereffects
- Atypical viewing patterns
- Poorer face recognition and memory

- Atypical local-global face processing: mixed evidence
 - reduced global processing?
 - increased processing of local details?
 - most commonly used paradigms: composite faces, configural vs. featural changes, face inversion, part-whole effect, spatial frequency manipulations, Thatcher illusion

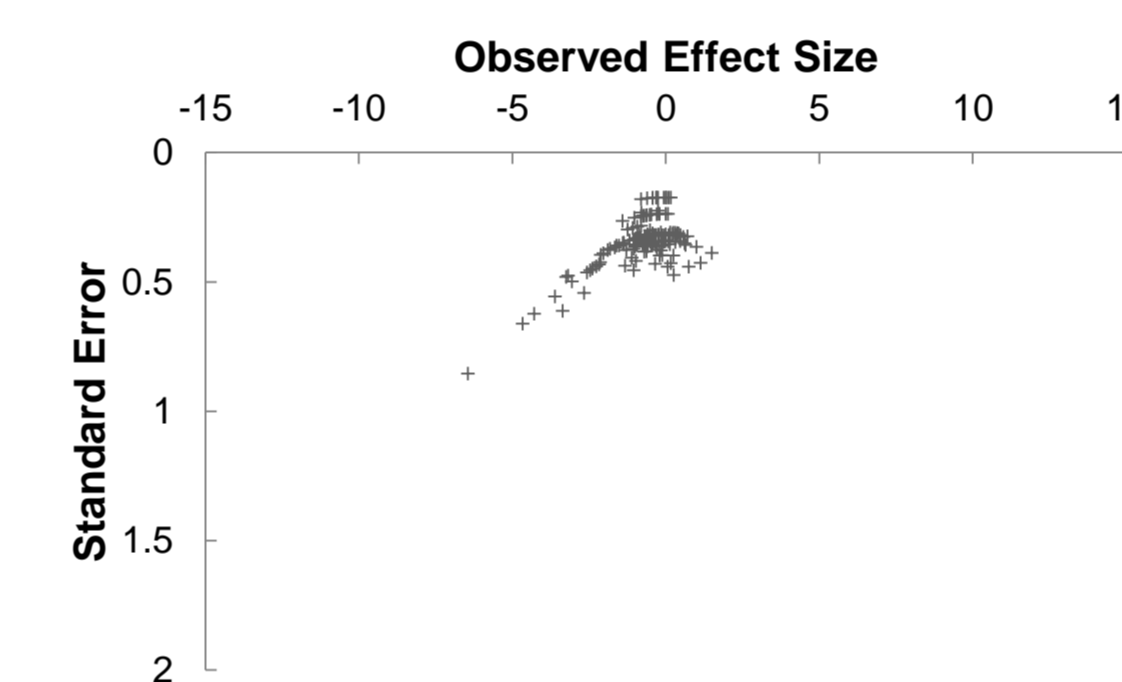
Objectives:

- Provide quantitative conclusions about the possible difference in local and global face processing in ASD, using a meta-analysis
- Evaluating which participant-, task-, and stimulus-related factors are driving these possible differences.

Preliminary Results

Overall Effect Size and Funnelplot:

- Effect size g : $M = -0.70$ ($SD = 1.08$).
- Funnelplot suggests a publication bias ($\tau = -.29$, $p < .0001$)

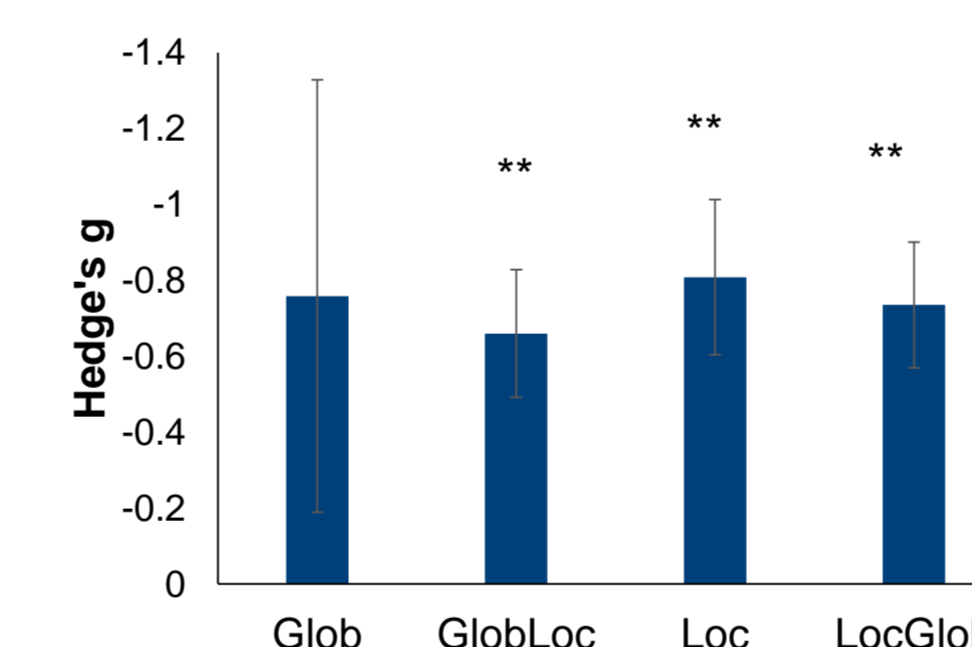


Effects of other moderating variables:

- No significant effect of participants' age, gender, or intelligence ($p > .05$)
- No significant effect of paradigm used ($p > .05$)

Effect of Local-Global Processing Level:

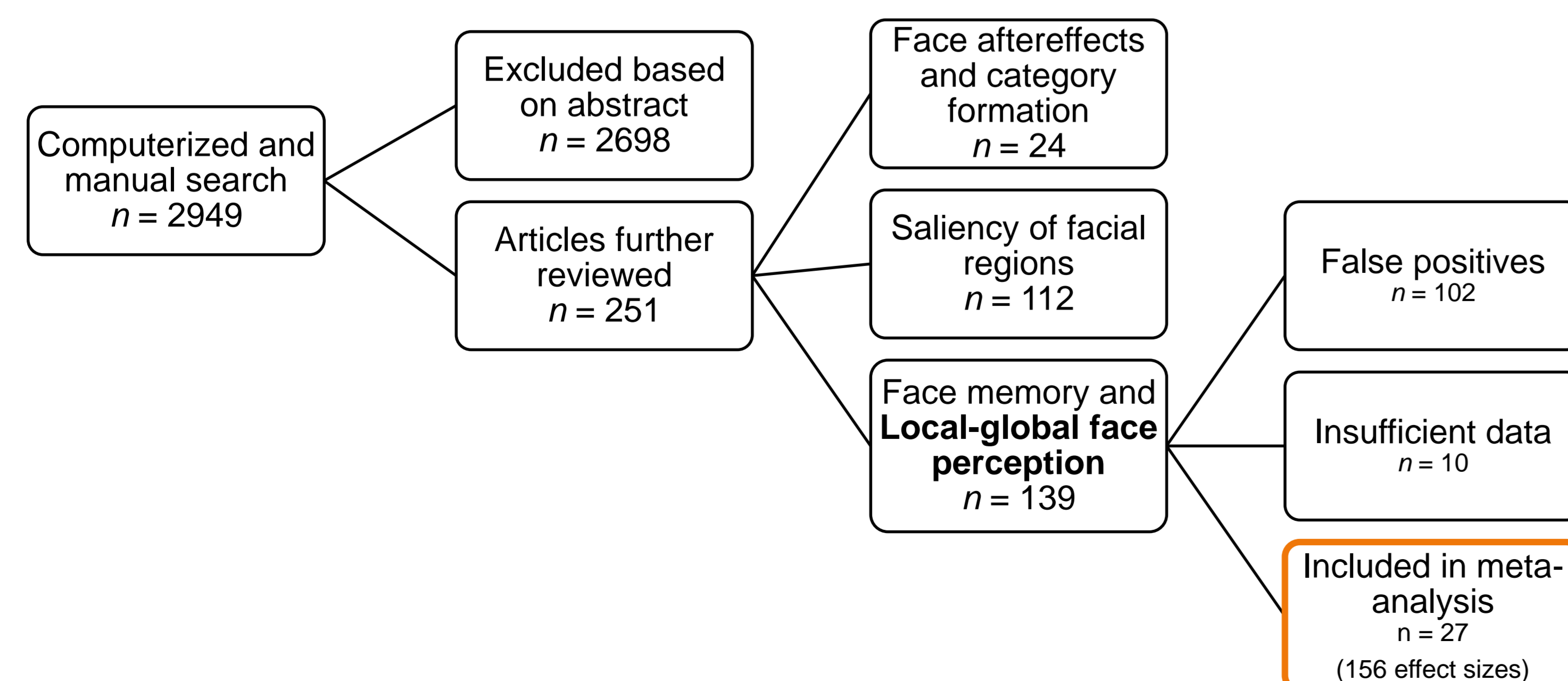
- No moderating effect of processing level ($F < 1$)



		Primary level of processing (<i>most relevant for task at hand</i>)	
Secondary level of processing (<i>less relevant for task at hand</i>)		Local	Global
Local		Loc	GlobLoc
Global		LocGlob	Glob

Literature Search & Selection Procedure

Computerized search in WoS and PubMed (ending September 2015)



Conclusions & Future Directions

(Preliminary) Conclusions:

- No evidence for an overall reduced global or enhanced local face processing in ASD.
- Preliminary analyses suggest no impact of task-, stimulus- and participant characteristics.

Future directions:

- Including additional papers
- More refined coding of moderating variables

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